

IN THE CLAIMS:

This listing of claims will replace all prior listings in this application:

Listing of Claims:

Claim 1 (Currently Amended): Coated strip product comprising a steel strip material ~~[[(2),]]~~ ~~characterized in that said strip material has~~ and a coating ~~[[(3; 6; 8)]]~~, the coating comprising at least one electrically insulating layer of zirconia in direct contact with the steel strip or in direct contact with an essentially metallic bond-coat which in turn is in direct contact with the steel strip.

Claim 2 (Currently Amended): Coated strip product according to claim 1, ~~characterized in that~~ wherein said coating and strip material have a thermal expansion mismatch of less than $\pm 25\%$ in the temperature range up to 1000 °C, where the thermal expansion mismatch is defined as:

$$(\text{TEC}_{\text{ss}} - \text{TEC}_{\text{ox}}) / \text{TEC}_{\text{ss}}$$

where ~~[[the]]~~ TEC_{ss} is the thermal expansion of said strip material and TEC_{ox} is the thermal expansion of said zirconia coating.

Claim 3 (Currently Amended): Coated strip product according to claim 1, ~~characterized in that~~ wherein the strip material has a surface roughness of $R_a < 0.2 \mu\text{m}$.

Claim 4 (Currently Amended): Coated strip product according to claim 1, ~~characterized in that~~ wherein the strip material has a thickness of 5 to 300 μm [[,]] ~~preferably 10 to 100 μm .~~

Claim 5 (Currently Amended): Coated strip product according to claim 1, ~~characterized in that~~ wherein a ferritic chromium strip steel material is used as the metallic strip material.

Claim 6 (Currently Amended): Coated strip product according to claim 5, ~~characterized in that~~ wherein said ferritic chromium strip steel material has a chromium content of at least 10% [[b.w.]] by weight[[,]] ~~suitably at least 14% b.w., and preferably in the range 16–25% b.w.~~

Claim 7 (Currently Amended): Coated strip product according to any of claim 1, ~~characterized in that~~ wherein the strip material is coated with at least one zirconia layer [[[3; 6; 8)]] on either side of the metallic strip material.

Claim 8 (Currently Amended): Coated strip product according to any of claim 1, ~~characterized in that~~ wherein at least one additional layer of zirconia is deposited on top of the at least one layer of zirconia which is in direct contact with the steel strip or in direct contact with a metallic bond-coat which in turn is in direct contact with the steel strip.

Claim 9 (Currently Amended): Coated strip product according to any of claim 1, ~~characterized in that~~ wherein the at least one layer of zirconia is stabilized zirconia[[,]] ~~preferably yttrium-stabilized zirconia (YSZ) with a percentage of Y_2O_3 in the range from 0–25% b.w., of said layer, suitably 3–20% b.w., preferably 5–15% b.w.~~

Claim 10 (Currently Amended): Coated strip product according to claim 1, ~~characterized in that the~~ wherein a thickness of the at least one zirconia layer is between ~~[[0,1]]~~ 0.1 and 20 ~~μm [[,]]~~ preferably between 0.5 and 5 μm .

Claim 11 (Currently Amended): Coated strip product according to claim 1, ~~characterized in that~~ wherein between the zirconia layer and the metallic strip material a metallic bond-coat is deposited~~[[,]]~~ preferably a bond coat of a metal such as Ti, Zr, Ni or Cr[[,]] to enhance the adhesion of the zirconia layer to the substrate.

Claim 12 (Currently Amended): Coated strip product according to ~~any of the preceding claims~~ claim 1, ~~characterized in that~~ wherein on top of the electrically insulating stabilized zirconia layer or layers a conducting metal layer is deposited, the metal layer selected from the group consisting ~~preferably of one of the following metals~~: aluminum, molybdenum, nickel, cobalt, copper, silver, gold and platinum, most preferably aluminum, molybdenum, silver ~~[[or]]~~ and copper.

Claim 13 (Currently Amended): Coated strip product according to claim 12, ~~characterized in that~~ wherein the metal top layer has a thickness of between ~~[[0,01]]~~ 0.01 and 5 μm .

Claim 14 (Currently Amended): Coated strip product according to claim 1 ~~characterized in that~~ wherein the electrically insulating layer(s) is/are deposited by ~~any known deposition~~

~~technique, including different a spray technique, techniques such as HVOF, plasma spraying, as well as a vapor deposition technique techniques such as Chemical Vapor Deposition (CVD), Physical Vapor Deposition (PVD), a dipping technique techniques, or a sol-gel technique techniques, preferably PVD in a roll-to-roll electron beam (EB) evaporation process.~~

Claim 15 (Currently Amended): Substrate material for the production of a flexible thin film product ~~products such as flexible Cu(In,Ga)Se₂ (CIGS) solar cells and solid state thin film batteries characterized in that~~ wherein the substrate material ~~it essentially~~ consists essentially of a coated product according to ~~any of the preceding claims~~ claim 1.

Claim 16 (New): Coated strip product according to claim 15, wherein the flexible thin film product is a Cu(In,Ga)Se₂ solar cell or a solid state thin film battery.

Claim 17 (New): Coated strip product according to claim 4, where the thickness is 10 to 100 μm .

Claim 18 (New): Coated strip product according to claim 6, wherein the chromium content is at least 14% by weight.

Claim 19 (New): Coated strip product according to claim 18, wherein the chromium content is 16-25% by weight.

Claim 20 (New): Coated strip product according to claim 9, wherein the stabilized Zirconia is yttrium stabilized zirconia with a percentage of Y_2O_3 in a range of 0-25% by weight of said layer.

Claim 21 (New): Coated strip product according to claim 20, wherein the percentage of Y_2O_3 is in a range of 3-20% by weight of said layer.

Claim 22 (New): Coated strip product according to claim 21, wherein the percentage of Y_2O_3 is 5-15% by weight of said layer.

Claim 23 (New): Coated strip product according to claim 10, wherein the thickness is between 0.5 and 5 μm .

Claim 24 (New): Coated strip product according to claim 11, wherein a metal of the metallic bond-coat is selected from the group consisting of Ti, Zr, Ni and Cr.

Claim 25 (New): Coated strip product according to claim 14, wherein the spray technique is HVOF or plasma spraying.

Claim 26 (New): Coated strip product according to claim 14, wherein the vapor deposition technique is chemical vapor deposition or physical vapor deposition.

Claim 27 (New): Coated strip product according to claim 14, wherein the electrically insulating layer(s) is/are deposited by physical vapor deposition in a roll-to-roll electron beam evaporation process.